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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,158	07/10/2003	Jin Soo Kim	DE-1492	2727

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David A. Einhorn, Esq.
Anderson Kill & Olick, P.C.
1251 Avenue of the Americas
New York, NY 10020

EXAMINER	
JACKSON, MONIQUE R	

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/617,158	KIM, JIN SOO	
	Examiner	Art Unit	
	Monique R Jackson	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-5 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-5 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 2 is objected to because of the following informalities: "15~300" and "1~500" should be replaced by "15-300" and "1-500", respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the limitation "and a concentration of about 1~500 ppm" in lines 2-3 but does not include a basis upon which this calculation is made, i.e. based on the total weight, volume, etc. of the finish material or the refrigerator or the part or compartment of the refrigerator, etc. Hence, one having ordinary skill in the art would not be reasonably apprised of the scope of the claimed invention and could not interpret the metes and bounds of the claim so as to understand how to avoid infringement.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishida et al (USPN 5,897673.) Nishida et al teach fine metallic particles-containing polymer fibers with

various fine particles therein and coated thereon, such as silver particles having a particle size in the nanoscale, examples include a mean particle size of 20nm and 50nm with final silver concentration within the instantly claimed range, and which can exhibit various functions of the fine metallic particles such as antibacterial deodorizing, wherein the fibers can be processed to make various products wherein deodorization is required such as refrigerator liners (Abstract; Examples; Col. 23, lines 3-5.)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. The teachings of Nishida et al are discussed above. Nishida et al do not teach that the finish material is made from a transparent or opaque resin to which pigment is added however Nishida et al do teach that the fibers may be made from polymers that may be transparent or opaque and further it is well established in the art that polymers may be provided with pigments or coloring agents as conventional additives to provide a product with the desired final color for a particular end use wherein Nishida et al teach that the fibers may be utilized to produce refrigerator liners.

8. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fontenot et al (US 2002/0182102) in view of Nishida et al. Fontenot et al teach a container liner such as a refrigerator liner comprising an inner absorbent layer comprising absorbent polymer fibers and a material capable of controlling odors such as those odors found in refrigerators (Abstract; Page

3.) Fontenot et al do not teach that the odor controlling material is silver nanoparticles however Nishida et al teach fine metallic particles-containing polymer fibers with various fine particles therein and coated thereon, such as silver particles having a particle size in the nanoscale, examples include a mean particle size of 20nm and 50nm with final silver concentration within the instantly claimed range, and which can exhibit various functions of the fine metallic particles such as antibacterial deodorizing, wherein the fibers can be processed to make various products wherein deodorization is required such as refrigerator liners (Abstract; Examples; Col. 23, lines 3-5.) Hence, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize the fine metallic particles-containing polymer fibers taught by Nishida et al to provide odor controlling properties for the refrigerator liner taught by Fontenot et al and to utilize routine experimentation to determine the optimum amount of deodorizing material to provide the desired odor controlling properties for a particular end use. Fontenot et al do not specifically teach that the inner absorbent layer includes pigments however it is well established in the art that polymers may be provided with pigments or coloring agents as conventional additives to provide a product with the desired final color for a particular end use.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-5 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 3 of copending Application No. 10/618,241. Although the conflicting claims are not identical, they are not patentably distinct from each other because nanosilver particles have antibacterial properties and because it is well established in the art that polymers may be provided with pigments or coloring agents as conventional additives to provide a product with the desired final color for a particular end use.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dhiru Nakarani can be reached on 571-272-1512. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monique R. Jackson
Primary Examiner
Technology Center 1700
September 15, 2004